

# Academy under fire over plans for new study of DNA statistics...

**Washington.** Less than two years after publishing a highly influential report on the use of DNA technology in forensic science, the US National Academy of Sciences (NAS) is about to launch a new, fast-track study of the use of DNA evidence in court cases.

But proposals for the new study have infuriated scientists and lawyers who fear it could undermine the recommendations of the original report. The critics charge that the Federal Bureau of Investigations (FBI) used improper methods to press for the study, and to confine its scope to an examination of statistics.

The report has been requested by the FBI. The Academy will conduct the work through its research arm, the National Research Council (NRC), and says that the report is needed to take account of new data published since the original study.

William Sessions, the former FBI director, asked for the study last April, claiming in particular the need to incorporate new data. He requested that it focus in particular on the use of the so-called "ceiling principle" in the statistical evaluation of DNA evidence. This uses conservative 'guesstimates' to evaluate the probability of a DNA match in cases where the data does not exist to support a more accurate estimate.

The principle has been widely used in court cases since being proposed in the first academy study. Its intention was to reduce detailed discussion of uncertainties involved in very low probabilities. In practice, however, it has often been used by defence lawyers to convince courts that there is too great a chance of a false conviction in cases depending on DNA evidence, resulting in recurrent acquittals both in the United States and elsewhere.

Critics are concerned that the new study will issue revised rules on statistical evaluation that are more to the liking of prosecutors and the FBI, and that its exclusive focus on statistics will undermine other parts of the old report which the FBI wishes to ignore, such as the requirement for forensic laboratories to publish error rates after independent inspection.

If it proceeds, the study will be conducted by a panel chaired by population geneticist James Crow of the University of Wisconsin, and will take just over six months to complete. It will proceed only if the NRC can raise the \$300,000 needed to pay for it. So far, it has received more than half that amount from the National Institute of Justice (NIJ) — a sister agency of the FBI in the Department of Justice — and smaller contributions from the National Institutes of Health and the Department of Energy.

Critics argue that the personal request from Sessions led the NRC to overrule the advice of its own Commission on Life Sciences, and proceed with the study. They also cite a letter from John Hicks, assistant director of the FBI laboratories division, to the director of the National Institute of Justice, as evidence that NIJ funding for the study was conditional on its scope being restricted to statistics.

Richard Lewontin of Harvard University, a population geneticist whose work strongly influenced the first report, has written to Bruce Alberts, the president of the Academy, attacking the FBI's conduct and warning that "there is no way that the NAS/NRC can come out of this affair undamaged if it persists" with the report.

In his letter, Lewontin suggests that the new panel will either be dominated by scientists sympathetic to the FBI — in which case it will be seen as "rigged" — or it will be balanced "by others like me", ensuring "divisiveness, struggle and confusion for the courts and the scientific community."

Another population geneticist, Jerry Coyne of the University of Chicago, says he is "not convinced" that the new data justify a new study, and that he is "disturbed by the willingness of the National Academy to do the bidding of the FBI." Peter Neufeld, co-chair of the DNA Task Force at the National

Association of Criminal Defense Lawyers, says the Academy "has been compromised" by its decision to do the report.

But Bruce Alberts stands by the decision of the NRC under his predecessor, Frank Press, to go ahead, saying that new data have enabled people to dispute the original report's findings. "My feeling is that we have to go back and look at it again," he says. "I think we would have to do that independent of the FBI's view."

"There were plenty of checks and balances along the way here," says Eric Fischer, chair of the NRC's biology board and project director for the new report. The NRC has two reasons to proceed with the report, says Fischer: it was requested to do so by a federal agency — the FBI — and is required to respond; and there is "extra data and analysis" now published and available to do an update, denying that a focus on statistical evaluation will block out other issues.

But Eric Lander of the Whitehead Institute at Cambridge, Massachusetts, a member of the panel that produced the original report, says the update is only necessary because the administration failed to meet the panel's call for a "standing committee" to keep its recommendations up to date. "There's lots of new information and new evidence, but no mechanism for dealing with it," he says. **Colin Macilwain**

## ... as confusion leads to retrial in UK

**London.** The Court of Appeal in London has ordered the retrial of a man convicted of rape after being identified through DNA evidence alone, because of confusion over the way in which the statistical interpretation of the DNA evidence was presented at his original trial.

The court ruled that evidence given by one of the forensic scientists, and the summing up of the judge, had fallen into the so-called 'prosecutor's fallacy' — the term used to describe confusion between two methods used to interpret the significance of an apparent match between two DNA samples.

The ruling may prompt a flood of similar appeals that DNA evidence had been wrongly interpreted to juries. Indeed, it is already

fuelling the heated debate in the United Kingdom and the United States (see above) about how to ensure the reliable use of DNA profiling techniques in the courtroom.

"This is the biggest straw that has been given to defence lawyers seeking to pick holes in the use of DNA evidence for a long time," says John Brookfield, a geneticist at the University of Nottingham. "I fear that this one will run and run."

The defendant, Andrew Deen, had been arrested during a random police check in Manchester, after his DNA profile was found to 'match' that of semen samples taken from a student who had been raped shortly beforehand. In February 1990, Deen was sentenced to 16 years in prison for this and two other rapes in the area.

Last summer, however, the appeals court agreed to hear evidence in Deen's defence, and in particular criticisms of the way in which DNA evidence was handled during his trial. The lawyer who prepared Deen's defence, Mike Mansfield, had previously obtained the release of the 'Birmingham ►

IMAGE  
UNAVAILABLE  
FOR  
COPYRIGHT  
REASONS

**Michael Mansfield:  
showed up 'fallacy'.**